

# NaturalPave Case Study

## Stabilization of Beet Production Areas



### Project Background

This North Dakota company is the largest producer of beet sugar in the U.S., and each year, they have only a 14-day window in which to harvest and stockpile over 30 million tons of sugar beets. Any delay can result in a significant loss of product, an unacceptable outcome for the farmers who work on the large agricultural commune.

Once harvested, the beets are transported along dirt roads where they are loaded onto 1,500 foot conveyor belts. After the beets are froze, they are stockpiled and stored on large concrete slabs.

Unfortunately, as little as ¼ inch of rain can render the unpaved unloading area mucky and unnavigable, forcing a complete shutdown of activity. Operators constantly have to scrape as far as 12 inches down to remove mud and beet spillage that becomes driven into the roadbed from nearby piles.

For the beet producer, bringing stability to these unpaved areas had become an urgent priority. The customer was seeking a solution that would:

1. Withstand inclement weather,
2. Support heavy equipment traffic, and
3. Prevent spillover from being driven into the surface.

### Challenges

The following challenges were identified:

- **Short Production Window** – The beet producer has 51 nearby grow sites positioned strategically for a fast turnaround. With such a short production window, stoppages may not only result in an immediate loss of product, but disrupt a tight transport schedule, hurting productivity and negatively impacting total yield.
- **Poor Soils** – The soils present on site consist of fat clays with high shrink/swell potential and broken-down organic matter. The total fines content of the soil was 94% with a Plasticity Index of 55 – making it unacceptable for constructing roads and very difficult to work with.

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### Solution

Midwest consulted with the company about their unique requirements, considering both their primary objectives and the heavy clay composition of the site's native soils. After conducting laboratory testing to determine the best solution, Midwest Industrial Supply, Inc. opted to treat the most vulnerable areas using a two-part approach.

First, the native soil was amended to a depth of 6" with 25% sand to reduce the expansive properties of the in situ clay. Then the amended soil was stabilized with Eco-Pave to create a durable, pavement-like driving surface at a considerably lower cost than that of asphalt paving. After compaction, Eco-Pave was topically applied to the stabilized surface for additional protection.

Perfect for heavy-use areas, Eco-Pave stabilized surfaces continue to increase their load-bearing capacity (CBR) as they support traffic over time.

### Results

The trial project was an immediate success, transforming loosely composed roads into robust surfaces that will withstand any weather and operating conditions without degradation. As a result, the company has requested that Midwest work with them as an ongoing consultant, finding solutions for other worksite areas, reducing costs of operation, and improving performance on a continual basis.

Midwest is proud to offer solutions that are affordable, customized to the needs of our clients, and crucially, able to meet the highest standards of environmental sustainability.

To find out more about Midwest and our NaturalPave solutions and products, contact us at 330.456.3121 or visit [www.midwestind.com](http://www.midwestind.com).

